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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RIDEOUT, WILLIAM F

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/569,493	<b>Applicant(s)</b> BERGER ET AL.	
	<b>Examiner</b> William F. Rideout	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 26-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed on 07/28/2010 have been fully considered but they are not persuasive.

a. In the remarks, the Applicant argues that the combination of Fraccaroli and Heinonen fails to disclose the claimed limitations;

[“assigning each user a specific profile containing data about said user and at least one constraint; performing a direct data interchange between at least two users as soon as they are in a specified communication zone; and clustering users within the same communication zone, based on the data and constraints of their profiles.”], (see claim 26).

The examiner, however respectfully disagrees with such an assertion since the examiner must give each presented claimed limitation, its broadest reasonable interpretation in light of the Applicant's specification.

In contrast to Applicant's assertion, Fraccaroli is understood to teach assigning each user in a mobile network a specific profile containing data about said user and at least one constraint See column 8 lines 35-44 wherein a user profile is assigned and column 9 lines 41-42 wherein constraints are disclosed);

performing a data interchange between at least two users when they are in a specified communication zone (See column 10 lines 52-56 wherein uses communicate with each other);

and clustering users within the same communication zone, based on the data and constraints of their profiles (See column 2 lines 46-50 wherein users are clustered according to location and profiles). Heinonen discloses a direct connection between users with similar profiles when they come into a communication zone (See column 7 lines 35-42 wherein a

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connection is made). It would have been obvious to make this combination to take advantage of available wireless technologies.

b. The reasoning used for the rejection of claim 1 is used to reject the similar limitations in claims 43 and 52.

c. Regarding claim 51, the Applicant argues that the combination of Chang and Heinonen fails to disclose the claimed limitations;

[“specifying attributes of desirable users, the attributes being specified at an initiator mobile terminal in an ad hoc communication network; searching, by the initiator mobile terminal, for users having the attributes specified by the initiator user by performing a direct data interchange between the initiator mobile terminal and each of a plurality of users in the mobile network; clustering together users having the attributes specified by the initiator user, to thereby form a user cluster; and providing the users of the user cluster with information regarding other users within the same cluster.”], (see claim 51).

The examiner, however respectfully disagrees with such an assertion since the examiner must give each presented claimed limitation, its broadest reasonable interpretation in light of the Applicant’s specification.

In contrast to Applicant’s assertion, Chang is understood to teach specifying attributes of desirable users, the attributes being specified at an initiator mobile terminal in an ad hoc communication network (See paragraph [0010] wherein attributes are specified by an initiator mobile terminal in an ad hoc network);

searching, by the initiator mobile terminal, for users having the attributes specified by the initiator user by performing data interchange between the initiator mobile terminal and each of a plurality of users in the mobile network (See Fig. 2 and paragraph [0023] wherein a search for users with specific attributes is disclosed);

clustering together users having the attributes specified by the initiator user, to thereby form a user cluster (See paragraph [0010] wherein clusters are formed); and

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providing the users of the user cluster with information regarding other users within the same cluster (See paragraph [0010] wherein information is provided to users). Heinonen discloses a direct connection between users with similar profiles when they come into a communication zone (See column 7 lines 35-42 wherein a connection is made). It would have been obvious to make this combination to take advantage of available wireless technologies.

Based on the above remarks on claims 26, 43, 51, and 52, and further clarification, it is clear that Fraccaroli in view of Heinonen and Chang in view of Heinonen teaches the claimed invention.

Claims 27-42, and 44-50 are rejected by virtue of their dependency of claims 26 and 43.

Therefore, this office action is made Final as shown below.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**3. Claims 26, 35, 36, 40, 43, 44, 46, and 52** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fraccaroli (US 6,549,768)** in view of **Heinonen et al. (US 7,249,182)**.

**Regarding claims 26, 43, and 52**, Fraccaroli discloses a method, device, and computer readable medium storing a computer program for grouping, equivalent to clustering, and a plurality of users in a mobile network (See column 8 lines 57-67), comprising:

assigning each user a specific profile containing data about said user (See column 5 lines 26-48) and at least one constraint (See column 9 lines 41-42);

performing a data interchange between at least two users as soon as they are in a specified communication zone (See column 10 lines 40-56 wherein interchange occurs after matching and location determination and column 7 lines 9-23 wherein zones are disclosed); and

clustering (grouping) users within the same communication zone, based on the data and constraints of their profiles (See column 2 lines 46-50).

However, Fraccaroli fails to disclose direct connection between users.

Heinonen discloses formation of localized ad hoc networks between users according to user profiles and interests (See column 7 lines 19-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Fraccaroli to comprise direct connection between users, as disclosed by Heinonen, to enhance operational efficiency.

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**Regarding claim 35**, Fraccaroli further discloses the method according to claim 26 above wherein users with similar profiles are grouped in the same cluster (See column 5 lines 25-48).

**Regarding claim 36**, Fraccaroli further discloses the method according to claim 26 above wherein each new user defined his profile and the at least one constraint, and the constraint specifies the type of users to which the user wants to be clustered (See column 9 lines 40-50).

**Regarding claim 40**, Fraccaroli further discloses the method according to claim 26 above, wherein users are clustered according to a common characteristic, and each user in the cluster is informed of the common characteristic (See column 10 lines 51-61).

**Regarding claim 44**, Fraccaroli further discloses the device of claim 43 above, wherein it has an interface for wireless data transfer (See Fig. 1 and column 4 lines 1-11).

**Regarding claim 46**, Fraccaroli further discloses the device of claim 43 above, wherein it is a mobile telecommunications terminal (See Fig. 1 and column 3 lines 45-55).

**4. Claim 51** is rejected under 35 U.S.C. 102(b) as being anticipated by **Chang (US 2002/0168938)** in view of **Heinonen**.

Regarding claim 51, Chang discloses a method for clustering a plurality of users in a mobile network, comprising;

specifying attributes of desirable users, the attributes being specified at an initiator mobile terminal in an ad hoc communication network (See paragraph [0010]);

searching for users having the attributes specified by the initiator user (See Fig. 2 and paragraph [0023]);

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clustering together users having the attributes specified by the initiator users, to thereby form a user cluster (See paragraph [0010]); and

providing the users or the user cluster with information regarding other users within the same cluster (See paragraph [0010]).

However, Chang fails to disclose searching, by the initiator mobile terminal, for users having the attributes specified by the initiator user by performing a direct data interchange between the initiator mobile terminal and each of a plurality of users in the mobile network.

Heinonen discloses searching for users with specific attributes by direct interchange in an ad hoc network (See column 7 lines 19-51).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Chang to comprise direct connection between users, as disclosed by Heinonen, to enhance operational efficiency.

5. **Claims 27-30, 32-34, 37-39, 41, 42, 45, and 47-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fraccaroli** in view of **Heinonen** and further in view of **Chang**.

**Regarding claim 27**, Fraccaroli discloses the method according to claim 26, wherein the communication zone defined by forming at least one cluster (See column 2 lines 46-50 and column 7 lines 9-23).

However, Fraccaroli in view of Heinonen fails to disclose an initiator user.

Chang discloses an ad-hoc mobile network set up by user profiles and initiated by a first user (See paragraph [0010]) and for a plurality of other users (See paragraph [0008]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to form a cluster



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having an initiator user and a plurality of other users, as disclosed by Chang, to increase flexibility by providing cluster initiation options.

**Regarding claim 28**, Fraccaroli further discloses a matching group area, equivalent to a cluster, that spans multiple cells and therefore is equal to or larger than a communication range of an individual user (See column 5 lines 38-48) as applied to claim 27 above.

**Regarding claim 29**, Fraccaroli in view of Heinonen fails to disclose an initiator causing a communication topology as applied to claim 27 above.

Chang discloses an ad-hoc network, constituting a communication topology, formed as a result of an initiator user (See paragraph [0010]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to form a communication topology, as disclosed by Chang, to increase communication efficiency.

**Regarding claim 30**, Fraccaroli in view of Heinonen fails to disclose a tree topology as applied to claim 29 above.

Chang discloses an ad-hoc network, and therefore a tree topology (See paragraph [0010]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to form a tree topology, as disclosed by Chang, to increase communication efficiency.

**Regarding claim 32**, Fraccaroli in view of Heinonen fails to disclose each user assigned to a single cluster.

Chang discloses users assigned to a single cluster (See paragraph [0010] wherein each user is assigned to one group).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to have each use assigned to a single cluster, as disclosed by Chang, to increase operational efficiency.

**Regarding claim 33**, Fraccaroli further discloses users autonomously deciding to which cluster he belongs as applied to claim 32 above (See column 9 lines 9-12 wherein a user requests to join a matching group, equivalent to a cluster).

**Regarding claim 34**, Fraccaroli in view of Heinonen fails to disclose redefining clusters with new users as applied to claim 27 above.

Chang discloses a cluster that is redefined if a new user not hitherto belonging to the cluster is identified within the particular communication zone and the new user has a profile relevant to the user cluster (See paragraph [0024]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to redefine clusters with the profile of a new user, as disclosed by Chang, to enhance operation by customizing the clusters according to new users.

**Regarding claim 37**, Fraccaroli in view of Heinonen fails to disclose exchanging profiles as applied to claim 26 above.

Chang discloses exchanging profiles for analysis between users within a cluster (See paragraph [0010]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to exchange

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profiles for analysis, as disclosed by Chang, to enhance operation by providing data to customize clusters.

**Regarding claim 38**, Fraccaroli in view of Heinonen fails to disclose exchanging data user-by-user as applied to claim 37 above.

Chang discloses exchanging data user-by-user (See paragraph [0010]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to exchange data user-by-user, as disclosed by Chang, to optimize operation by providing data to customize clusters.

**Regarding claim 39**, Fraccaroli in view of Heinonen fails to disclose exchanging profiles according to a communication topology as applied to claim 37 above.

Chang discloses exchanging data and user profiles according to a communications topology (See paragraph [0010] wherein an ad-hoc tree topology is used to exchange data and profiles).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen to exchange data using a communication topology, as disclosed by Chang, to optimize operation by providing data to customize clusters.

**Regarding claim 41 and 45**, Fraccaroli in view of Heinonen fails to disclose communication without a central switching entity, as applied to claim 26 above.

Chang discloses users communicating without the interposition of a central switching entity (See paragraph [0010] wherein a first user communicates directly with a second user).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method and device of Fraccaroli in view of Heinonen to have users communicate without a central switching entity, as disclosed by Chang, to reduce the resourced needed for implementation.

**Regarding claim 42**, Fraccaroli in view of Heinonen fails to disclose an initiator specifying attributes of desirable users as applied to claim 26 above.

Chang discloses an initiator user that specifies attributes of desirable users, wherein the initiator user is clustered with the desirable users, and the users in the cluster are identified to one another (See paragraph [0010]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Fraccaroli in view of Heinonen to specify attributes of desirable users, as disclosed by Chang, to enhance the user experience.

**Regarding claim 47**, Fraccaroli in view of Heinonen fails to disclose a computing unit as applied to claim 43 above.

Chang discloses a profile storage and matching unit, equivalent to a computing unit, for comparing its own profile or profile group with the profile or profile group of another user (See Fig. 1 and paragraph [0021]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the device of Fraccaroli in view of Heinonen to have a profile storage and matching unit, as disclosed by Chang, to increase operational efficiency.

**Regarding claims 48, 49 and 50**, Fraccaroli in view of Heinonen fails to disclose a computer program as applied to claims 43 and 46 above.

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Chang discloses a profile storage and matching unit which necessarily runs a computer program with program coding stored on a machine-readable media (See Fig. 1 and paragraph [0021]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the device of Fraccaroli in view of Heinonen to run a stored computer program, as disclosed by Chang, to provide a mechanism to realize efficient operation.

6. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Fraccaroli in view of Heinonen in view of Chang, and further in view of Twitchell, JR (US 2002/0119770). Fraccaroli in view of Heinonen and further in view of Chang fails to disclose passing a signal through intermediate users as applied to claim 27 above.

Twitchell discloses an ad-hoc network formed according to profiles (see paragraph [0023]) wherein signals are passed through secondary, equivalent to intermediate, users and a maximum is set for the number of secondaries (See paragraph [0032]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the method of Fraccaroli in view of Heinonen and further in view of Chang, to connect through a maximum number of intermediate users, as disclosed by Twitchell, to increase efficiency by providing additional communication paths.

### **CONCLUSION**

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of 33 the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bill Rideout whose telephone number is 571-270-5762. The examiner can normally be reached on M-F 7:30 - 5:00 EST Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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